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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,866	10/25/2000	Kazim Seven	50019.28US01	1795

23552 7590 11/21/2005

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EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/696,866	SEVEN, KAZIM	
	Examiner	Art Unit	
	Lun-See Lao	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09-04-2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is response to requirement for restriction filed on 08-31-2005. Applicants provisionally elect to prosecute the invention taught by group 1, which corresponds to claims 1-11 with traverse. Claims 1-28 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Dunnebacke (US PAT. 5,729,174).

Consider claim 1, Dunnebacke teaches that an apparatus for automatically determining a type of each load coupled to an amplified A channel (see fig.1, 13,14) signal and an amplified B channel (15,16) signal and automatically configuring the amplification of the A and B channel signals (13-16) to drive each determined load type (11, 12), comprising:

(a) a first configuration (such as, first configuration mode) of amplifiers, a first amplifier (2) and a second amplifier (3) are arranged to generate an amplified A channel signal (13,14) between a first output of the first amplifier (2) and a second output of the second amplifier (3), wherein the first and second outputs are adapted for driving a load

of a first type (11) coupled there between, and a third amplifier (4) and a fourth amplifier (5) are arranged to generate an amplified B channel signal (15,16) between a third output of the third amplifier(4) and a fourth output of the fourth amplifier (5), wherein the third and fourth outputs are adapted for driving another load of the first type (11) coupled there between (see col. 4line 30-col. 5 line 7);

(b) a second configuration (such as, second configuration mode) of the amplifiers, the first and second amplifiers (2,3) are arranged to generate the amplified A channel signal between the first and second outputs, wherein the first and second outputs are adapted for driving a load of a second type (12) coupled there between, and the second amplifier (3) and the third amplifier (4) are arranged to generate the amplifier B channel signal (15,16) between the second output and the third output, wherein the second and third outputs are adapted for driving another load of the second type (12) coupled there between (see col. 4 line 30-col. 5 line 24); and

(c) a control circuit (26-28) that automatically determines the type of loads coupled to the amplified A and B channel signals (13-16) and automatically employs the determined load type to select an arrangement of the amplifiers in one of the first configuration (such as, first configuration mode) and the second configuration (such as, second configuration mode), wherein the selected arrangement of amplifiers provides an appropriate level for the amplified A and B channel signals (13-16) to drive their respective loads (see col. 5 line 5-col. 6 line 12).

Consider claims 2-3, Dunnebacke teaches that a first switch (see fig. 1, 10) that couples one of the first and second outputs (14,15) to the load of the first type when in a

closed position, disconnects the one of the first and second outputs (14,15) from the load of the first type when in an open position, and the control circuit automatically determines the type of load to be of the first type when the first switch (10) is closed and of the second type when the first switch is open (see col. 4 line 60-col. 6 line 12); and a second switch (8) that couples the third output (from amplifier 4) to an input of the control circuit (28) when in a closed position, and disconnects the third output from the input of the control circuit (28) when in an open position, the control circuit (28) detects the type of load by detecting the disposition of the second switch (9 and see col. 4 line 30-col. 6 line 12).

Consider claims 4-5, Dunnebacke teaches that the fourth amplifier (see fig.1, 4) includes a tri-state input that is coupled to the control circuit (28) such that the fourth amplifier is enabled when the selected arrangement of the amplifiers in the first configuration (such as, first configuration mode), and the fourth amplifier is disabled when the selected arrangement is the second configuration (such as, second configuration mode and see col. Col.4 line 60-col. 6 line 12); and a third switch (9) that couples the first output to an input of the second amplifier (3) when in a closed position, and disconnects the first output from the input of the second amplifier when in an open position, the first switch is controlled by the control circuit such that the third switch is closed when the selected arrangement of the amplifiers in the first configuration (such as, first configuration mode), and the third switch (9) is open when the selected arrangement is the second configuration (such as, second configuration mode and see col. 4 line 30-col. 6 line 12).

Consider claims 6-7, Dunnebacke teaches that the first amplifier (see fig.1, 2) and the second amplifier (3) are configured as a bridge amplifier such that the first output and second output provide an A channel differential output (13,14), and the third amplifier (4) and the fourth amplifier (5) are configured as another bridge amplifier such that the third output and the fourth output provide a B channel differential output (15,16), when the selected arrangement is the first configuration (such as, first configuration mode and see col. 4 line 30-col. 5 line 24); and the second output of the second amplifier (3) provides a virtual ground, the first output of the first amplifier (2) provides an A channel differential output (13,14), and the third amplifier and the fourth amplifier (4,5) are configured as another bridge amplifier such that third output of the third amplifier provides a B channel differential output (15,16), when the selected arrangement is the first configuration (such as, first configuration mode and see col. 4 line 30-col. 5 line 24).

Consider claim 9 and 11, Dunnebacke teaches that the first, second, and the third amplifiers inherently include a controllable current limited output that is enabled in the selected arrangement is the second configuration (see col. 4 line 31-col. 5 line 24); and the control circuit (see fig.1, (26-28)) further comprises a short circuit detector, the short circuit detector determines that a short circuit condition exists when the second output is maintained below the reference voltage for a predetermined time interval, and the control circuit inherently (because, switch 9 and 10 are circuit breakers) disables the second amplifier (3) when the short circuit condition exists (see col. 4 line 3-col. 5 line 16).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dunnebacke (US PAT. 5,729,174) in view of Mizukami (US PAT. 6,069,960).

Consider claim 8, Dunnebacke fails to teaches that the control circuit is adapted for detecting a disposition of a jack having a mechanical switch, the mechanical switch being disposed in a closed position unless a plug is inserted therein, and the mechanical switch being in an open position when a plug is inserted therein such that the control circuit determines the disposition of the jack by monitoring the disposition of the mechanical switch.

However, Mizukami teaches that the control circuit (see fig.2, (8)) is adapted for detecting a disposition of a jack (J) having a mechanical switch, the mechanical switch being disposed in a closed position unless a plug (P-H) is inserted therein, and the mechanical switch being in an open position when a plug is inserted therein such that the control circuit (8) determines the disposition of the jack (J) by monitoring the disposition of the mechanical switch (see figs.2, 3a-3e and col. 3 line 35-col.5 line 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Mizukami into Dunnebacke to

provide a connector device for connecting, to a first information-handling apparatus, a plurality of second information-handling apparatuses having different impedances by connectors comprising jacks and plugs, the connector device allowing the first information-handling apparatus to have a reduced space for accommodating the connectors and provide a choice to the user for outputting the audio signal from a speaker or a headphone.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dunnebacke (US PAT. 5,729,174) in view of Kusakabe (US PAT. 6,107,886).

Consider claim 10, Dunnebacke does not clearly teach that apparatus of each of the controllable current limited outputs of the first, second, and third amplifiers includes an output transistor that generates an output current in response to a drive signal, and a controlled clamp that is arranged to clamp the drive signal when the selected arrangement is the second configuration.

However, Kusakabe teaches that apparatus of each of the controllable current limited outputs of the first, second, and third amplifiers (see fig.1, (N1, N2, N3)) includes an output transistor (AQ11-12, AQ21-22 and BQ31-32) that generates an output current in response to a drive signal, and a controlled clamp (such as, threshold) that is arranged to clamp the drive signal ,when the selected arrangement is the second configuration (see col. 4 line 22-col. 5 line46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Mizukami into Dunnebacke to provide a power amplifier capable of amplifier signal on plural channels at a high efficiency with less heat generation.

Response to Arguments

7. Applicant's election with traverse of claims 1-11, 12-18 and 19-29 RESPONSE AND PROVISION ELECTION Paper No. 2-4 is acknowledged. Applicant argued that

the restriction is not proper. This is not found persuasive; because, the examiner believes that the group I (claims 1-11) are drawn to plural amplifier channels (eg. Parallel amplifier), classified in class 330, subclass 124R; group II (claims 12-18) are drawn to circuitry combined with specific type microphone or loudspeaker, classified in class 381, subclass 111; and group III (Claims 19-28) are drawn to combined with automatic amplifier disabling switch means, classified in class 330, subclass 51.

Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I, II and III have separate utility such as load type of amplifier/monitoring jack for plug insertion/auto disable amplifier. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Therefore, these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dunnebacke (US PAT. 5,708,390); and Noble (US PAT.

5,161,198) are cited to show other related the output coupling capacitor free audio power amplifier dynamically configured for speakers and headphone with excellent click and pop performance.

9. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(703) 872-9306

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Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 11-10-2005

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
11/14/05